3. Summary of the Analysis of the Management Situation

OVERVIEW

An Analysis of the Management Situation (AMS) was prepared and documented in October 1982 as a means of determining the productive capacity of the Forest and Grasslands to supply various goods and services. Copies of the AMS are filed at Ranger District Offices, the Forest Supervisor's Office, and the Regional Office.

This chapter summarizes the AMS. It depicts the current goods and services produced and projects supply and expected future use on the Forest. It also summarizes expected future conditions of the Forest once the Plan is implemented.

Supply and projected future use for various Forest goods and services have been analyzed to identify necessary improvements, resolve current public issues, and prevent future correct. The goal of the Plan is to identify the level and type of Forest uses that would help meet projected future use while enhancing or maintaining resources in a cost effective manner.

Table 1 compares key outputs from the Plan with projected future use and supply.

Supply data is based on information entered in the Forest data base which was used to model the single resource maximum benchmark output levels. This is our best estimate of supply potential. Supply is discussed in detail in the Forest AMS which is summarized in this chapter of the Plan.

Projected future use is from the Forest AMS and in some cases such as sawtimber, portions of this use would be supplies from areas other than the Cibola National Forest.

Table 1. Comparison of the Plan's Key Outputs with Supply and Projected Future Use.

Resource Output	Average Annual Unit of Measure	Plan		Supply		Projected Future Use	
		Period 1	Period 5	Period 1	Period 5	Period 1	Period 5
Sawtimber Sales	MBF	6,300	-	18,000	-	90,000 1/	-
Products (Pulpwood)	MBF	200	-	2,400	-	2,400	-
Firewood Sold and Free Use	MBF	7,200	6,100	17,300	19,300	27,400	33,600
Grazing Capacity	MAUM	185.2	191.5	194	241	-	-

Table 1. (Continued) Comparison of the Plan's Key Outputs with Supply and Projected Future Use.

Resource Output	Average Annual Unit of Measure	Plan		Supply		Projected Future Use	
		Period 1	Period 5	Period 1	Period 5	Period 1	Period 5
Permitted Livestock Use	MAUM	189.7	186.7	-	-	194+	241+
Wilderness Recreation	MRVD	78.4	89.6	115.2	115.2	89.8	127.0
Developed Recreation	MRVD	709.4	1331.1	820	2,270 2/	820	2,270
Dispersed Recreation	MRVD	655.8	1,358.9	2,226	2,226	700	1,700
Wildlife 3/	ACF	99,400	99,600	101,400	101,700	101,400	101,700
Water							
Minerals							
Natural GAS	BBTU	21,000	100,000	Unknown	Unknown	21,000	100,000
Oil	BBTU	50	300	Unknown	Unknown	50	300
Coal	BBTU	0	144	Unknown	Unknown	0	144
Uranium	BBTU	876,960	1,754,000	Unknown	Unknown	876,960	1,754,000

1/ Sawmill capacity within Cibola Zone of influence.
2/ Supply was limited to projected future use (Max Recreation Benchmark).
3/ Wildlife portion of total dispersed recreation.

TIMBER AND FIREWOOD

Under Alternative A the Forest provides an annual sawtimber volume of 7.7 MMBF in Period 1. Actual harvest has averaged 6 MMBF annually for the last decade.

The previous ten year history (1977-1986) d actual timber harvest and/or timber offered is as follows:

1977 – 3,271	1978 – 10,505
1979 – 5,325	1980 – 3,485
1981 – 3,930*	1982 – 5,355
1983 - 0**	1984 – 15,315
1985 – 2,355*	1986 – 7,564

* Offered Volume - Sales still unfinished
** Actual harvest continued on unfinished sales

Amended June 1989

Forest lands were subjected to a screening process to determine suitability for timber production. The first criterion for suitability was productivity. The next criterion was whether the land was legislatively or administratively withdrawn from timber harvest. Available land was then screened to determine whether the technology is available to permit timber harvest without irreversible soil or watershed damage. An additional suitability test was used to determine whether the lands can be adequately regenerated within 5 years following final harvest. Table 2 displays lands capable, available, and suitable for timber production.

Table 2. Lands Capable, Available, and Suitable for Timber Production

Criterion	Classification	Acres
Less than 10% stocked by trees	A. Non-forest 1. Non-forest land	834,851
Legislatively or administratively withdrawn	B. Forest land but withdrawn from timber production	57,232
	1. Wilderness	1,434
	2. Military Withdrawal	
Lack of technology or not suitable as a timber product	C. Physically not suitable	89,397 1/
	1. Technologically not suitable	
	2. Pinyon-juniper woodland	523,203
	D. Suitable for timber lands	376,296 2/& 3/
	E. Total National Forest System Lands	1,882,413

Amended June 1989

l/ Includes 87,073 acres with site index less than 40 and 2,224 acres with inadequate volume per acre for cable harvest.

2/ Includes 55,490 acres that are marginal from a regeneration standpoint and are not scheduled for harvest in Period l, but because of lack of data were retained.

3/ Based on 1985 market values; the economically appropriate lands should be 306,900 for Period 1. This does not affect the long-term relationship of goods and services produced on the Forest. The difference reflects acres not economically appropriate which will not be scheduled for harvest in Period 1.

A base harvest schedule is displayed in Chapter 4, Table 14.

Management standards and guidelines for vegetation management are contained in the individual prescriptions for each management area in Chapter 4 of the Plan.

Forest management is designed to maintain an even flow of sustained yield of wood products while improving stand conditions and increasing long-term yields. By the end of Period 5, stands which are now in large pole size material will have reached harvest size and benefits of current s11vicultural investments will begin to be realized.

Accessible areas containing dead and down firewood for free personal use are rapidly being depleted. As a result, the use of green firewood is increasing causing a need for better management.

Future Trends

Some assumptions regarding future timber and firewood use are as follows:

The future demand for wood products expected to increase.

The current 90 MM8F annual sawt1~ber sawmill capacity within the C1bola's zone of influence exceeds the C1bola's supply of sawt1mber. However, at least three other National Forests and many private forest landowners provide timber within this zone. In the future, the C1bola w111 work to determine its appropriate share of the market consistent with long-term net public benefits including resource integration, environmental quality and management considerations.

The future use of firewood will increase as costs for natural gas and electric1ty rise.

The projected future need (33.6 MMBF/year by the end of Period 5) for firewood will exceed supply (6.1 MMBF/year) on those portions of the Forest within acceptable driving distance from metropolitan Albuquerque.

The projected increase in the use of firewood may eventually level off or even decrease if the City of Albuquerque restricts the use of wood stoves and fireplaces at some time in the future because of air quality concerns.

Conclusion

The long-term sustained yield capacity, base harvest schedule, and allowable sale quantity will be determined by following the prescriptions, standards and guide-11nes, and yield estimates in the Plan.

The Forest will work to meet the projected need for personal use firewood in Period 1. Some of the future use of firewood can be met by offering commercial and personal green firewood sales and personal use of logging residue.

Expected Future Condition

Commercial sawtimber sales offered in the Plan will make 8,344 MBF available on a yearly average during Period 1.

It is uncertain whether commercial sawt1mber sales w111 be of any significant gain for local communities other than municipalities.

Timber harvest will be more evenly distributed throughout the Forest. In recent years, harvest has been located exclusively on the Mt. Taylor Ranger District. The Plan will eventually bring all suitable areas for timber harvest under management and regulation. Harvest activities will be coordinated with standards and guidelines for wildlife habitat diversity, water quality, visual quality, cultural resources, as well as other Plan objectives.

Other changes may include the following:

Utilizing cable logging systems on slopes over 40 percent.
Clearcut harvests in support of wildlife. Clearcut openings would not exceed 40 acres and generally will be smaller than 10 acres.
The 7,350 acres in need of reforestation will be planted by 1990.
Backlog of precommercial thinning was completed In FY 1 989 at a total of 9,000 acres.

Subtle and gradual changes will result from timber activities, creating generally more healthy and diverse stands with a greater variety of age classes. Distribution of timber harvest throughout the Forest will achieve regulation on suitable acres over the long run.

The Forest's ability to meet long-term firewood may not be met even though improved access and overstory modification are increased. The Forest will evaluate and implement methods to meet future firewood needs including working cooperatively with the State of New Mexico, other land management agencies, and landowners.

As a result of expected firewood use not being met, the Forest can expect increases in firewood theft. The price of commercial firewood in the Albuquerque metropolitan area will also increase.

WILDERNESS

The Cibola presently contains 137,239 acres in four designated wildernesses. This acreage accounts for about 8 percent of the Forest's total acreage. Activities within wildernesses include hiking, horseback riding, camping, hunting, cross-country skiing, snowshoeing, environmental studies, and technical mountain climbing.

Capacity as estimated by the Wilderness Opportunity Spectrum is 115.1 MRVDs.

Existing use for the four wildernesses (Apache Kid, Manzano Mountain, Withington and Sandia Mountain) is estimated to be 72,742 RVDs per year. The Sandia Mountain Wilderness received 60,600 RVDs 83 percent of the total use. On the ground management of these areas is currently accomplished through the use of seasonal employees and volunteers. Current management emphasis is to encourage "no-trace" visiting and to provide wilderness information to the visitor.

Currently, the Sandia Mountain Wilderness is being used at nearly its full capacity of 61,407 RVDs, the Apache Kid at 10 percent of capacity, Manzano Mountain at 39 percent of capacity and Withington at 2 percent of capacity.

Future Trends

Total projected use grows from 89.8 MRVDs in Period 1 to 127 MRVDs in Period 5 based on past population growth trends. Portions of the Sandia Mountain Wilderness are currently over utilized since this particular wilderness is approaching user capacity. This over utilization will remain a problem until capacity management is implemented. Limited access and lack of trails and trailhead facilities are responsible for some of the concentrated use problems. Similar congestion problems in heavily use areas can be expected in the three remaining wildernesses if corrective measures are not taken.

Conclusion

Portions of the Sandia Mountain Wilderness are currently over utilized and will continue to be until a significant portion of the users shift to other areas. Access, trails and trailheads play an important role in use distribution.

Expected Future Condition

Management of wilderness will be intensified to meet projected use. Additional investments in trail construction, maintenance, rights-of-way and trailhead facilities will alleviate some of the current problems of concentrated use. Management direction will attempt to shift overuse on the Sandia Mountain Wilderness to other wildernesses. Wilderness experiences will range from high use levels with limited opportunities for solitude to low use levels with excellent opportunities for solitude.

The Plan provides for 78.4 MRVDs annually in Period 1 and 89.6 MRVDs in Period 5.

In all cases, wilderness values will be preserved. Access to wilderness will be unlimited until impacts of use on wilderness values require mandatory visitor use permits. Regulation of use through permits may be necessary within the next five years on the Sandia Mountain Wilderness. Information programs will continue as a primary technique to limit the impact of use on the wilderness resource.

WILDLIFE AND FISH

Because of the diversity of vegetation, climate, and geology, the Forest and Grasslands provide habitat for a variety of wildlife and fish species. The more familiar species include Rocky Mountain bighorn sheep, various hawks and owls, Merriam's and Rio Grande turkey, three species of quail, pheasant, blue grouse, Steller's and pinyon jay, elk, bear and mule deer. Numerous other mammals, reptiles, amphibians and fish are also present.

A major wildlife management objective was to select species for each major vegetation type which would serve as an indicator for detecting important habitat changes. Of the 607 vertebrate wildlife and fish species on the Forest and Grasslands, 11 were chosen as management indicator species. These were the long billed curlew, elk, mule deer, yellow-bellied sapsucker, house wren, plain titmouse, Merriam's turkey, red breasted nuthatch, pygmy nuthatch, hairy woodpecker, and Rio Grande turkey.

The Endangered Species Act of 1973 requires that all Federal agencies and departments attempt to conserve threatened and endangered (T&E) species. Those species Federally listed as threatened or endangered are automatically listed by the States. The Forest has, or will have, the following Federally or State designated threatened or endangered wildlife species:

Common Name	Scientific Name	Status 1/
American Peregrine Falcon	Falco Peregrinus anatum	Endangered/Federal
Bald Eagle	Haliaeetus leucocephalus	Endangered/Federal
Arkansas River Shiner	Notropis girardi	Endangered I/NM
Mississippi Kite	Ictinia mississippiensis	Endangered II/NM
Violet-crowned Hummingbird	Amazilia violiceps	Endangered II/NM
Baird’s Sparrow	Ammodramus bairdii	Endangered II/NM
McCown’s Longspur	Calcarius mccowni	Endangered II/NM
Zuni Mountain Bluehead Sucker	Catostomus discobolus Yarrowi	Endangered II/NM

1/ The State of New Mexico (NM) has the following definitions:

A. Endangered Group I - Any species or subspecies whose prospects of survival or recruitment in New Mexico are in jeopardy.

B. Endangered Group II - Any species or subspecies whose prospects of survival or recruitment in New Mexico are likely to be in jeopardy within the foreseeable future.

In addition, the Forest also has the primary habitat for the black-footed ferret (Mustela nigripes). Although none have been sighted in any of the active prairie

dog towns, some of the sites may have the potential of supporting a population should live trapping and transplanting from other States become a reality.

A recovery plan for the peregrine falcon was written in 1977. The prime objective of this plane was to increase the breeding population to 100 pairs by 1995 for Rocky Mountains and southwest. The plan, at present, is being revised and updated.

In 1982 a recovery plan for the bald eagle was approved by the Director of the U.S. Fish and Wildlife Service. The plan although entitled "Southwestern Bald Eagle Recovery Plan" concentrates its action in Arizona. No specific recommendations have been written for New Mexico, Texas, or Oklahoma.

New Mexico has not yet prepared a recovery plan for their endangered species.

Habitat management consists of annual public closure of falcon breeding, nesting and rearing habitat in all alternatives during the breeding, nesting and rearing season and maintenance of fencing to control livestock in the riparian area surrounding key Sucker habitat. Additional fencing is provided in the Proposed Action and Alternatives B. C, D and F. Alternatives A and E do not provide the necessary fencing. Fencing for the Zuni Bluehead Sucker may improve the immediate habitat, but only through improved range management will the entire watershed be improved. This management is provided in the Proposed Action and Alternatives B, C, D and F.

The potential for removing or down-listing any of the species is unknown. The additional protective fencing provided in all alternatives except A and E will stabilize the habitat of the Zuni Bluehead Sucker.

Presently, there are no threatened or endangered plants on the Cibola National Forest or National Grasslands. Erigeron rhizomatus, Zuni fleabane, has been proposed for listing in the threatened category. The following have been nominated for Federal protection:

Teumeya papyracantha (Pediocactus papyrcanthus)--Grama grass cactus
Clematis hirsutissima var. arizonica--Arizona clematis
Astragalus accumbens--Zuni milk-vetch

The Regional Forester's Sensitive Plant list includes the following:

Aster horridus--Spiny aster
Astragalus wittmannii--One-flowered milk-sketch
Silene plankii--Plank's catchfly

"The objective of the Sensitive species category is to keep these species off Federal lists through positive planning and management...Ensure that sensitive species and their occupied habitats will not be adversely impacted without a through analysis of significance of such impacts to prevent any trend toward Federal or State listing" (excerpt from March 24, 1981, letter from the Washington Office).

The objective of all alternatives is to afford protection for threatened and endangered wildlife species and sensitive or nominated plant species to achieve delisting.

Exotic wildlife species are found on portions of the Forest and Grasslands. Barbary sheep and Siberian Ibex are found along the Canadian River on the Kiowa National Grassland. Barbary sheep and Red Fallow deer have been sighted near Mt. Taylor, having escaped from a nearby game ranch on private lands.

Future Trends

Consumptive and nonconsumptive wildlife use increases from 112 MRVDs in Period 1 to 168 MRYDs in Period 5. To accommodate projected use, the Forest and Grasslands need to increase efforts in wildlife habitat improvements, assure protection of threatened or endangered species, and increase coordination with other resource activities as well as federal and state game departments. The Forest has the ability to supply wildlife use in excess of projected use.

Threatened, endangered, or sensitive plants will be considered in implementing all resource activities to assure protection of these species.

Conclusion

Management activities involving wildlife and fish species should include: 1) coordination with other resource activities; 2) continued direct habitat improvement work; 3) continued protection of threatened or endangered species; 4) continued cooperation with appropriate game departments; and 5) wildlife habitat diversity sufficient to maintain the minimum viable population of management indicator species.

Expected Future Condition

The Plan provides annually 127 MRVDs of wildlife use in Period 1. By Period 5 272 MRVDs are provided annually.

Fish and wildlife habitats on the Forest and Grasslands will improve. Wildlife funding by the end of Period S provides 659 water sources; 1,117 acres of fencing; 5,981 acres seeding; and 18,000 acres of prescribed burning for improved wildlife habitat. Through other funding an additional 219 water sources will be developed; 2,140 acres will be fenced; 21,540 acres of pinyon-juniper and 4,400 acres of shinnery oak will be converted to grassland; 1,200 acres of timber will be clearcut for wildlife purposes; and S,960 acres of firewood will be clearcut for wildlife benefits. Clearcuts in suitable timber will generally be small patches of 10 acres or less. None will exceed 40 acres in size.

Management requirements such as snag retention, timber rotation age, growing stock levels, old growth retention, hiding cover, feature protection and size and dispersal of openings all are considered for wildlife impacts. The Plan will accomplish most of the New Mexico's Game and Fish Department Comprehensive Plan objectives by the end of Period S.

Mitigating measures are contained in the management requirement of the Plan regarding construction, reconstruction and maintenance of roads, and dispersed recreation use. These measures will reduce impacts on wildlife populations and habitat. The Plan also contains management requirements which will at least maintain and, in most instances, increase management indicator species. It also provides measures which will protect and perpetuate threatened or endangered wildlife species for the purpose of delisting the species if possible.

RANGE

The goal of range management on the Forest is to provide forage for domestic livestock use under cost efficient management systems without impairment of land productivity or other resource needs. A further goal on the Grasslands is to demonstrate and promote grassland agriculture.

Past and current management on many of the Forest ranges has not led to the achievement of the above goal on the mountain Ranger Districts. Of the 91 grazing allotments currently being utilized, 43 exhibit serious resource degradation which result in an unsatisfactory classification. Most allotments are producing less than the biological capacity. Permitted use is currently 134,746 AUMs on the Forest portion with capacity estimated at 103,961 AUMs.

Current management direction will promote a slow but continuous resolution of range problems. Forage production and utilization studies, stocking adjustments and implementation of allotment management plans are made on approximately one allotment per year.

Of the 317 Grassland grazing units, which are comparable to allotments, 99 percent are in the moderately high condition class. Most units are stocked within established carrying capacities and there are no major problems. Grassland use totals 68,783 AUMs with a capacity estimated at 82,829 AUMs.

Currently permitted use for the Forest and Grasslands totals 203,529 AUMs while capacity is 186,790 AUMs.

Future Trends

Under existing management practices, range conditions on the Forest allotments will not change significantly. Some areas will slowly improve while others continue to deteriorate.

Range on the Grasslands will continue to improve slowly except for areas ecologically suited for oak brush, which will decline from a range standpoint

without shinnery oak control.

Conclusion

Range conditions on some allotments on the Forest will show gradual improvement, others will continue to deteriorate. If stocking and management corrections are made, range conditions will respond and improve. Grassland units will continue to maintain satisfactory conditions, but will produce less than the potential if current management is continued.

Expected Future Condition

Collectively, grazing use on the Forest and Grasslands currently exceeds capacity by 8 percent-16,739 AUMs. The Plan will reduce this permitted use to 180.9 MAUMs annually during Period 3. Capacity will be 190 MAUMs at this time. Use and capacity will be balanced by reducing livestock numbers and by increasing management intensity and capacity to achieve optimum distribution and forage utilization where coat effective. Permitted use will reach 186.7 MAUMs annually by the end of Period 5 while capacity increases to 191.5 MAUMs.

In order to increase management intensity, the Plan would add an additional 976 miles of fence, 404 miles of pipeline and 578 watering sources. Also, 25,900 acres of overstory modification and 61,718 acres of brush control activities would be performed.

The intensification of management in addition to range improvements and a reduction in livestock numbers will result in improved range conditions. Improved range condition indirectly increases plant and wildlife diversity, watershed condition and water quality by increasing effective ground cover and reducing soil loss.

Riparian areas will receive necessary special management to ensure quality water and wildlife habitat. Nearly 40 percent of the riparian areas will be treated by direct means for improving this resource--seeding, planting and fencing. The remaining portion will be improved by increased livestock management, herding and by placing salt and water developments away from riparian areas.

RECREATION

New Mexico, Texas, and Oklahoma have been among the fastest growing dates in the nation and this rapid population growth is projected to continue. As population increases, the future needs for outdoor recreation are also expected to increase.

Dispersed recreation Includes such activities as hiking, backpacking, picnicking, hunting, fishing, gathering forest products, bird watching, water skiing, off-road vehicle Navel, swimming, and sightseeing.

There are approximately 1,729,899 acres available for dispersed recreation use. These acres are categorized by use of the Recreation Opportunity Spectrum (ROS) classes as follows:

Semi-Primitive, Nonmotorized	406,821 acres
Semi-Primitive, Motorized	927,992 acres
Roaded, Natural	391,005 acres
Rural	1,081 acres

The ROS classes provide the framework for defining types of recreation opportunities and identifying what recreational experiences the Forest and Grasslands might be able to provide. The ROS estimated capacity for dispersed recreation is 2,226 MRVDs.

Dispersed recreation use, including consumptive and nonconsumptive wildlife use, was estimated to be 609,500 recreation visitor days (RVDs) in F.Y.1981. Dispersed recreation accounts for the largest amount of recreation use and is projected to be the fastest growing segment in the future.

The Forest and Grasslands are open to off-road vehicle (ORV) trawl except the Black Kettle National Grasslands. The Black Kettle National Grasslands are cloud 10 motor vehicle entry except for roads signed open. A portion of the Magdalena Mountains is closed to ORV use to protect the Langmuir Research Site

and public safety. Other closures or restrictions are for soil, wildlife protection or public safety.

Developed recreation use of the 69 developed recreation sites on the Forest and Grasslands was estimated at 493,100 RVDs in F.Y. 1981. The people at one time (PACT) capacity for these sites is 11,132. Fees are charged at seven of these sites. Some of the sites are utilized in excess of 50 percent of the design capacity, especially on the Sandia Ranger District.

Nearly all sites are operated at a reduced service level which results in a shorter season of use and limited clean-up and maintenance. At many sites the quality of the visitors' experience has deteriorated considerably. Water quality, visitor control and general resource protection continue to decline.

Future Trends

Dispersed recreation is expected to increase to 1,700 MRVDs annually by the end of Period 5. The increase is because of population growth and an increase in participation. Areas closest to population centers will receive most of the impact.

Developed recreation is projected to increase to 2,270 MRVDs annually by the end of Period 5. The Forest could accommodate 3,250 MRVDs by the end of Period 5 through expanding existing sites and constructing new sites on potential areas.

Under current conditions, the use of the existing facilities will be exceeded by approximately 60 percent at the more popular developed sites by the end of Period 5. If current management direction continues, it is expected that many of the existing sites will be removed or closed because of health or safety problems, conflicts between different users will become a major problem, and the quality of the recreation experience will be diminished.

Conclusion

The Forest and Grasslands have the potential to accommodate future increases of dispersed recreation. However, this potential cannot be realized under current management direction. Additional trail construction, managing use to capacity, shifting use patterns, cooperating with other agencies, utilizing volunteers and manpower programs, and increasing public awareness will all be needed to meet future trends.

Current management direction will not alleviate the future problems associated with developed recreation. Changes such as increased clean-up and maintenance, increased private sector involvement, construction of additional facilities, increased public awareness of recreational opportunities, and increased use of volunteers will assist in off-setting these problems.

Expected Future Condition

Projected future use of dispersed recreation can be met in the Plan at the 80 percent level--1,357 MRVDs annually--at the end of Period 5. In order to provide this use, 168 miles of trails will be constructed or reconstructed. Additional trailheads will also be constructed and rights-of-way for roads and trails will be obtained for better dispersion of the recreationists. However, full service management is provided for in only 50 percent of the management areas.

The Plan will satisfy only 58 percent of the projected future use for developed recreation by the end of Period 5--1,322 MRVDs. Only 40 percent of the developed recreation sites will be managed at the full service level.

In order to satisfy some of the future use, new developed recreation sites with a capacity of 9,370 PAOTs will be constructed by the end of Period 5. Of this amount 3,200 PAOTs will be provided by private sector development and will include expansion of the present Sandia Peak Ski Area, possible development of a new ski area in Upper Las Huertas Canyon on the Sandia Ranger District, and addition of a snowplay-snowmobiling-cross country ski and summer recreation center on the Mt. Taylor Ranger District.

Projected developed recreation use in excess of planned capacity and less than full service management of recreation sites will result in some site deterioration because of overcrowding.

Interest in developing an alpine (downhill) ski area on Mt. Taylor has been expressed since the 1950s and as recently as 1983. A winter sports study team, however, concluded in 1972 that a potential ski area "...would not meet optimum proportions..." and could provide only "...a marginal local area." Criteria upon which suitability was determined included: 1) exposure to prevailing wind and wind scouring; 2) temperature; 3) vertical rise, steepness and length of slope; 4) amount, quality and dependability of snowfall; and S) capacity. The greatest problems noted included lack of dependable snow in subsequent snow surveys--1 good year out of every 3 years--and, a low capacity of 1,000 PAOTs.

An important point to remember with the planned development of Mt. Taylor is that Mt. Taylor, as a mountain and not just sections of it, is considered a cultural resource by western Pueblos like Acoma, Laguna, and Zuni. It is a spiritual marker for Navajo people and of great cultural value to the nearby land grants such as San Mates, Cebolleta, Cubero, and Bartalome Fernandez.

The Greater Grants Industrial Development Foundation (GGIDF) has invested in preliminary feasibility studies addressing the possibility of an alpine ski area development in the Mt. Taylor area. These preliminary studies indicate a resort complex including residential units would be required to finance the ski are development. A land exchange has been suggested to provide land for the resort complex development at the potential ski area base. The GGIDF has been advised that a land exchange in the core mountain area of Mt. Taylor could not be justified as being in the public interest. However, any new information the GGIDF can provide in terms of suitability and economic feasibility studies which would indicate that an alpine ski area may have potential without a land exchange will be considered.

Mt. Taylor has potential opportunity for snowplay, nordic skiing and summer recreation.

Approximately 450 acres of the upper portion of Las Huertas Canyon have potential for development as both a nordic and alpine ski area.

The area's suitability for such a development results from its northern aspect and high elevations, which assure adequate snowfall and snow retention, as well as its proximity to both New Mexico's largest urban population (Bernalillo County) and the Sandia Crest Highway.

The area is upstream of Cooper's LS Ranch and the Presbyterian Church Camp in sections S and 6, T. 11 N., R. SUE. and sections 32 and 33, T. 12 N., R. S E.

Ski area development will not occur without further analysis and evaluation consisting of an economic feasibility study and an environmental analysis of the area's physical, biological, social, and economic factors and interrelationships. Public involvement will occur during this analysis. The area will be managed to maintain its potential for skiing opportunities.

The Sandia Mountains are considered a valuable cultural resource and of religious significance to the Pueblo of Sandia. It is also recognized that the Sandias are of cultural significance to land grants such as San Pedro and Carnue as are the Manzanos to land grant communities such as Chilili, Tajique, Torreon, Manzano, Punto de Agua, and Abo.

MINERALS

Exploration, development, and production of minerals, energy resources, and common varieties have the potential to conflict with other resource protection, uses, and activities. The full mineral potential is not known but is estimated in part from information provided by the US Geological Survey and the New Mexico Bureau of Mines and Mineral Resources.

Table 3 displays acreages of probable occurrence for leasable and locatable minerals.

Amended 1-9-87

Table 3. Acres of Probable Mineral Occurrence

Mineral Potential Rating	Leasable Minerals	Locatable Minerals
Demonstrated Favorable Production	1,655	63,918
Demonstrated Favorable Development	30,508	6,996
Demonstrated Favorable Prospecting	282	9,488
Demonstrated Favorable No Activity	137,762	17,783
Theoretically Favorable Prospecting	266,245	4,973
Theoretically Favorable Exploration	1,875	5,544
Theoretically Favorable No Activity	789,201	18,236

Under current management direction action is taken on all locatable mineral operating plans, lease applications, and common variety mineral permits as outlined in 36 CFR 228 and FSM 2822.41. Mineral validity contests are undertaken where detrimental surface disturbance is possible or occurring and where mining claims are suspected of being invalid.

Approximately 57 mineral lease applications are processed each year. Of these, 35 leases are approved covering approximately 56,762 acres. Leasable energy minerals production in 1977 produced the following billion BTUs: natural gas - 845; oil - 27; and uranium - 10,080.

Future Trends

The current interest in mineral prospecting, exploration, and development combined with the high potential for production will affect the minerals resource management workload. Table 4 displays mineral production for Periods 1-5.

Table 4. Projected Energy Minerals Production

Mineral	Annual Production BBTU Period				
	1	2	3	4	5
Natural Gas	21,000	42,000	63,000	80,000	100,000
Oil	50	100	150	200	300
Coal	0	20	60	90	144
Uranium	876,960	1,753,920	1,754,000	1,754,000	1,754,000
Geothermal	0	0	0	0	103

Conclusion

As the country endeavors to become more energy independent, the Forest will be impacted by exploration, development, and production of various energy minerals. This increased activity will have impacts on other natural resources. The Forest needs to be prepared to address this concern and mitigate the corresponding impacts to the extent necessary.

Expected Future Condition

The timing and location of mineral prospecting, exploration and development are difficult to predict since these activities are controlled by the private sector and are based on international demand, supply and market prices.

The Plan provides funding sufficient to process mineral operating plans, leases and permits based on projections from historical needs.

In addition to the 77,900 acres withdrawn from mineral entry, approximately 6,000 acres will be proposed for withdrawal under the Plan. This will protect new recreation sites, proposed research natural areas, electronic sites, an administrative site and the principle research site of the Langmuir Research Area.

SOIL AND WATER

Six ground water basins underlie the Forest. Minor amounts of water are drawn from these basins by windmills for use by wildlife and domestic livestock. The Forest yields 99,690 acre feet of water per year from 29 administrative watersheds.

Past resource uses have created unacceptable soil erosion and reduced water quality on 17 of the watersheds. Annual soil loss in these watersheds varies from .05 to 5.83 tons per acre. The overall Forest annual average is 2.99 tons per acre. Pollution of streams, ponds, and lakes is of major concern. Sedimentation is the major pollutant and generally follows heavy localized storms. Livestock grazing, off road vehicle use, and poorly located and/or maintained roads are the more prevalent sources contributing to nonpoint pollution because of soil loss. Efforts are currently focused on integrating soil and water protection with current and future uses and activities of the other natural resources. Presently there is one area where direct soil erosion measures are being taken--Hausner Canyon.

Future Trends

It is doubtful that under current management direction the trend on the 17 unsatisfactory watersheds could be altered significantly. As a result these watersheds would continue to erode and reduce water quality.

Conclusion

In order to improve watershed conditions, the following actions need to be considered: 1) treatment of land by pitting, reseeding, and on site water management; 2) balancing grazing use with capacity; 3) rehabilitating approximately 5,000 acres of riparian areas; 4) stabilizing channels; 5) reconstruction of system roads; and 6) closure and revegetation of nonessential roads and travelways.

Water yield under current management will decline slightly to 99.2 M acre feet annually by Period 5.

Expected Future Condition

The Plan with its combination of direct watershed treatments and indirect intensified management will result in an improved watershed condition on all watersheds. By the end of Period 5, 27 watersheds will be in satisfactory condition and two in unsatisfactory condition. The two watersheds in unsatisfactory condition will, however, be at or near potential. Average annual soil loss for all watersheds should be reduced by 10 percent. In addition, riparian area improvements will further improve water quality.

The Plan provides annually 99.4 M acre feet in Period 1 which increases slightly to 99.6 M acre feet in Period 5.

CULTURAL RESOURCES

Lands in and surrounding the Forest contain archeological sites important to the understanding of the prehistory, history, past land use patterns, environmental change the formation and collapse of complex societies, and abandonment of many settled areas.

The Forest currently has records on 1,152 archeological and historical sites. Estimates of the total number of sites that may exist on these lands range from 20,000 to 26,000. Three sites on the Forest are listed in the National Register of Historic Places. Two of these three are registered National Historic Landmarks. Two sites on the Mountainair Ranger District have been nominated to the National Register while many remain to be nominated.

The current cultural resources program focuses on four areas: 1) protection; 2) quality review of archeological field work; 3) allocation of cultural resources to management categories; and 4) interpretation of these resources for the education of visitors and specialists.

Future Trends

Various other resource uses and activities will increase with time, threatening the cultural resources. The rate at which these resources will be threatened or depleted in the future will vary with the state of the economy, level of Forest funding, market for timber and minerals, and academic research interests. Depletion can be controlled through proper management as outlined in the Plan.

Conclusion

Archeological management has been effective in controlling impacts of various other resource activities. The cultural resources program has been designed to ensure that use of the resource occurs wisely and in a controlled manner. The Plan provides for management of natural deterioration, and protection from pilfering and vandalism.

Expected Future Condition

The Plan provides funds for protecting the Gallinas Springs National Register site from gully erosion. It also provides an attainable level of law enforcement for vandalism and pilfering.

Interpretation of cultural resource sites for public information and education on the Sandia Ranger District are provided for in the Plan.

Archeological management will continue, and expand, the current successful program, as a means of protecting or preserving cultural resource sites and/or the information they might provide.

Implementation of the Plan will result in an effective program of cultural resources protection, interpretation, and management. The future condition of the Forest's cultural resources will beneficially reflect this program.

RESEARCH NATURAL AREAS

Research Natural Areas (RNAs) are administratively set aside to protect naturally occurring ecosystems that have been relatively free of human disturbance or have recovered from man's influence. The areas typify important forest, shrub land, or grassland types that have scientific interest or importance. Research Natural Areas are established for nonmanipulative research, observation and study. Currently there are no established RNAs on the Forest.

Future Trends

As future use of natural resources increases, the options for designating RNAs will diminish. This is especially true as the population increases and future needs for recreation, timber and firewood rise.

Conclusion

In order to meet RNA targets assigned to the Forest and preserve specific vegetation types for future study, suitable candidate areas need to be studied for possible inclusion in the RNA system within two years.

Expected Future Condition

Proposed RNAs requiring study and preparation of an establishment report for approve, by the Chief of the Forest Service are: 1) Little Water Canyon (910 acres) on the Mt. Taylor Ranger District; 2) Bernalillo Watershed (990 acres) on the Sandia Ranger District; and 3) one area on each of the three National Grasslands. Little Water Canyon is representative of blue spruce. The Bernalillo Watershed is a grama-galleta grassland. The Kiowa and Rita Blanca National Grasslands may

contain representative shortgrass prairie grasslands and the Black Kettle may contain midgrass prairie grasslands.

DIVERSITY

Diversity implies environmental variety, the key aspects of which are the kinds, numbers, proportions, and distribution of plants and animals and the different associations. Management of the Forest primarily affects the relative proportion and distribution of plant and animal species and the associations.

Diversity of plants and animal species is impacted by man's activities. By the mid-1890's, significant amounts of grazing and lumbering were taking place. These activities brought construction of roads, water impoundments, and a variety of other man-made improvements. As access increased, the amount of human activity also increased. As a result of these changes, some plant and animal communities have been modified.

Future Trends

As use for Forest resources increases in the future, diversity of the various plant and animal communities will be altered.

Conclusion

In order to protect and perpetuate plant and animal communities and ensure as much diversity as possible, the Forest needs to develop and implement management direction for this purpose. Off-road vehicle closures, fencing, water development and eyrie wardens are examples of current management direction to protect and enhance plant and animal diversity.

Expected Future Condition

In general, timber harvest and overstory modification activities will increase diversity of both plant and animal species by changing the pattern, distribution and age classes of overstory vegetation.

VISUAL RESOURCES

The Forest encompasses a rich variety of vegetation, climatic, and geologic zones.

The visual quality of the Forest has been altered to varying degrees by timber harvest, road construction, farming, vegetative manipulation, mineral exploration and production, and utility corridors. In order to protect the visual quality, visual quality objectives have been established and are displayed in Table 5. Manipulation of the landscape varies from none in Preservation to a considerable amount in Maximum Modification.

Table 5. Acres of Visual Quality Objective

Preservation	Retention	Partial Retention	Modification & Maximum Modification	Rehabilitation
137,665	33,568	247,357	1,437,701	258

Future Trends

The visual quality of lands viewed from recreation sites, prominent vista points, and scenic travelways is becoming increasingly important. Forest visitors appreciate the natural quality of the landscape and are not eager to see it altered.

Conclusion

In order to maintain the natural quality of the landscape, visual quality management techniques need to be applied to all future projects. Specific emphasis needs to be placed on those areas identified as high in scenic value or in recreation visitor use.

Expected Future Condition

Impacts on visual quality are minimal. The Plan contains management requirement to maintain Visual Quality Objectives (VQOs) at current inventory objectives with emphasis on maintenance of retention and partial retention VQOs.

The more disruptive activities such as timber harvest, overstory modification and road construction occur on modification and maximum modification acreages.

LANDS AND SPECIAL USES

Included within the Forest boundaries are private lands, mineral patents, and lands administered by other agencies. The Forest can acquire land through exchanges, purchase, donation, and service easements. Disposal of land is generally accomplished by exchange, although sale is permitted under certain circumstances.

Utility and communication facilities, recreation residences, concessions, and rights-of-way are authorized on the Forest by special use permits.

In order to make adjustments in the landownership pattern for administrative purposes, 39,563 acres of Forest or Grassland have been identified for exchange. Criteria for selection of these lands for exchange includes: 1) isolated tracts; 2) improves management; 3) needed by local community; 4) not suitable for Forest purposes; 5) improves consolidation of public lands; and 6) meets overriding public needs.

Lands desirable for acquisition by the Forest Service should meet one or more of the following criteria: 1) tracts within wilderness; 2) water related; 3) high recreation potential; 4) contain unique natural or cultural values; 5) needed to stabilize or protect threatened or endangered species; and 6) needed to improve ownership and management pattern or meet research needs; 7) needed to provide access or protect public land from fire or trespass or prevent damage to public land resources; 8) needed for rehabilitation or stabilization to restore productivity of public lands; 9) needed to meet programs prescribed by Congress or U.S. Department of Agriculture; and 10) needed to improve management or meet specific administrative needs or benefit other Forest programs.

Current management direction indicates that the Forest needs to acquire 173 miles of road right-of-way in order to assure adequate access for public and administrative use. Local counties need to acquire 88 miles of right-of-way within the Forest and Grasslands for the same reasons. An estimated 3,300 miles of property boundary need to be surveyed and posted to standards.

The Forest and Grasslands currently administer 625 special use permits covering 84,000 acres and 2,050 miles of rights-of-way.

Future Trends

The fragmented landownership pattern on the southern portion of the Sandia Ranger District, in the Zuni Mountains, and on the Mills Unit (Canadian River) of the Kiowa National Grasslands present administrative problems which need to be resolved. As population increases, these problems are expected to increase.

It is estimated the future needs for electronic sites and various utility lines and gas and oil pipelines will remain strong through the planning horizon.

Conclusion

The Forest should attempt to resolve the landownership problems as a means of improving administration of these federal lands. In doing so, some of the problems associated with rights-of-way and property survey can be eliminated. Land line location, utility corridors and electronic sites have all been identified as concerns and need to be addressed in the Plan.

Expected Future Condition

The Plan provides sufficient funding for the administration of special use permits. Based on historical experiences, the Plan will also provide for land exchange and acquisition.

An estimated 173 miles of rights-of-way are needed to meet multiple use objectives. An additional 88 miles of rights-of-way need to be acquired by the counties. The Plan only provides for acquisition of 70.8 miles of rights-of-way. An estimated 3,300 miles of land line need to be surveyed. The Plan will locate 3,240 miles by the end of Period 5.

An attempt has been made to establish corridors or windows for major utility facilities such as natural gas pipelines, electric transmission lines, or major transportation routes. The corridors or windows have been established as a means of providing routes through the Forest in order to minimize development impacts on the surface resources. Corridors are shown on the Transportation end Utility Corridors map enclosed with the Plan.

The demand for electronic sites has increased dramatically in recent years. The Plan will meet this demand by retaining the current eleven electronic sites and expanding four by 79 acres. Four new sites will be added providing an additional 195 acres for this use.

LISTED, WILD, SCENIC AND RECREATIONAL RIVERS

A 105 mile long stretch of the Canadian River in northeastern New Mexico was inventoried in 1982 by the National Park Service in a Nation-wide Rivers Inventory. Approximately 13 miles of the 105 are within the Kiowa National Grassland. Within these 13 miles is a small 40 PACT campground, a historic stagecoach station and a homestead. Public use within the Grassland portion is very light, with an estimated 600 RYDs in 1982 at the Mills Canyon Campground.

The portion of the river within the Grassland would qualify as a Scenic River under section 2 (b) of the Wild and Scenic Rivers Act because of the limited access and largely undeveloped shoreline.

Future Trends

The Forest would not be the appropriate lead agency to pursue designation of the river because of the limited portion within the Grassland. There is no public agency proposing designation at this time. Current use of the Mills Canyon area is light and is expected to increase slowly.

Conclusion

Because of the area's potential for Scenic River designation, it should be managed to preserve the characteristics which led to its listing in the Rivers Inventory.

Expected Future Condition

The 13 mile stretch of the Canadian River will not be altered from its existing condition. The Plan provides for management of the area similar to that of the past. The Plan will attempt through land exchange or scenic easement, acquisition of 8 miles of land along the river, currently in private ownership, in order to assure public access and protect the area's unique qualities. Mineral leasing will be permitted but restricted to no surface occupancy.

AIR

The majority of air pollution affecting the Forest originates from other areas. These areas are primarily metropolitan areas and, to a lesser extent, unpaved roads and farming operations. Some temporary and localized pollution results from prescribed burning and wild fires on the Forest.

Current Forest Service research in the sixteen western states ("Atmospheric Deposition in Natural Ecosystem of the Western U.S.") will provide some information on acid rain and related impacts on Forest Service land. Upon the completion of that research, the Forest Service will consider further action on the Cibola National Forest.

Prescribed use of fire on the Forest is approved in advance by the New Mexico Environmental Improvement Division.

Future Trends

Current Forest practices have only minor, short-term effects on air quality.

Conclusion

Sources of Forest Service air pollution because of prescribed burning can be controlled and limited.

Expected Future Condition

Use of prescribed fire to treat fuels will more than double over current use levels by the end of Period 5. However, such fires will be in accordance with State standards and managed for maximum smoke dispersal.

PROTECTION

Protection includes fire, insect and disease and law enforcement.

Fire

Fire management on the Forest is designed to provide a cost-effective program responding to land and resource goals. This program includes wildfire prevention, presuppression, suppression, fuel reduction and prescribed fire activities.

The threat of wildfire starting outside the Forest boundary and moving onto the Forest has increased considerably in the past 30 years. This is especially true for the Sandia Ranger District because of the influx of new homes adjacent to the Forest boundary. From 1950 to 1980, the population of Bernalillo County has increased by 187 percent.

From 1970 through 1979, the Forest had an annual average of 102.3 lightning caused fires and 44.1 man caused fires. The average annual acreage burned was 289.2 acres for lightning caused fires and 564.1 acres for man caused fires. Approximately 78 percent of these fires occur between April 15 and August 15, a period when the fire hazard is generally at its peak.

Insect and Disease

Dwarf mistletoe is found throughout most of the timber land on the Forest. The degree of infection varies widely. Some timber stands are virtually mistletoe free, while others are severely infected. Mistletoe reduces the growth and vigor of trees, increasing susceptibility to attack by insects. During timber harvest and thinning operations attempts are made to remove as many infected trees as possible.

The western spruce budworm has caused serious defoliation of spruce, Douglas fir and true fir in the Sandia, Manzano, Magdalena and Mt. Taylor areas. Of the 17,800 acres defoliated, most are within established wildernesses and do not materially impact suitable timber land. The impact is primarily visual.

The spruce beetle has caused some losses to Englemann spruce in past years on Mt. Taylor. This particular pest is currently at an endemic level.

The Grasslands have experienced periodic outbreaks of range caterpillars and grasshoppers. Some of these outbreaks have been serious enough to cause economic impacts on the livestock industry. Extensive aerial spraying of the Grasslands and adjacent private lands for control of these insects has taken place in recent years.

Law Enforcement

The Forest and Grasslands play host to an increasing number of people each year for recreation and livelihood purposes. Some of these visitors illegally remove a variety of resources for profit. As an example, an estimated 12,000 cords of firewood are illegally removed each year. Illegal removal of Christmas trees and wildlings is also a problem.

Other offenses include theft of Government property, vandalism, dumping of garbage, damage and removal of archeological artifacts, fire violations, cultivation of marijuana, theft of property of visitors and illegal off-road vehicle use.

Future Trends

Fire occurrence, acreage burned and loss of resource values will continue to rise because of an expected large increase in public use. Also, protection and suppression funds remain constant after Period 2. Some of the fire hazard will be reduced as the harvest of dead firewood increases, but the fire risk will increase as the population grows, particularly in areas close to population centers.

Dwarf mistletoe levels will decrease on the Mt. Taylor Ranger District through continued timber harvest activities. Mistletoe will increase on other portions of the Forest until similar activities are initiated. The most recent surveys indicate the spruce budworm populations are declining and no direct suppression activities are anticipated or recommended at this time. Spruce beetle populations can be limited by timber harvest activities. Populations of range caterpillars and grasshoppers are cyclic and can be expected to increase in the future.

As can be expected of most areas located in the sun belt, New Mexico, Texas and Oklahoma will continue to see increased population growth. This growth will continue to cause law enforcement problems.

Conclusion

Man caused fire risk will continue to increase as the population increases.

Future timber harvest in the mixed conifer type should be designed to reduce insect and disease susceptibility and vulnerability by favoring thrifty ponderosa pine and Douglas fir as opposed to spruce and true fir.

Range caterpillar and grasshopper population increases on the Grasslands will have to be controlled when they approach epidemic proportions.

The Forest needs to continue monitoring insect and disease levels and take appropriate control actions as needed.

The current level of law enforcement is not expected to keep pace with the projected increase in population and the assumed increase in violations of Federal and State Laws.

Expected Future Condition

Increasing uses of the Forest, particularly for recreation and timber harvest, and continuing accumulations of natural fuels increase the risk for large, intense wildfires. These factors, coupled with costs for protection and suppression held at a constant rate, increase the potential for catastrophic fires for Periods 3 to 5. Long-term productivity of soil and water relationships and the resources and uses dependent upon the relationships between soil and water can be affected in proportion to the size and intensity of a wildfire.

Insect populations which have a potential to reach epidemic proportions will be treated through silvicultural, biological or chemical means. Diseases, particularly dwarf mistletoe, will be controlled by removal of infected trees during intermediate and regeneration stages of a shelterwood cut.

Infestations will be monitored within wildernesses as a means of identifying potential spread to adjoining areas. Control efforts within wilderness are limited to biological and chemical methods and require the approval of the Regional Forester.

The Plan provides for an increase in funding of 47 percent over the current level. This increase appears sufficient to provide adequate law enforcement on the Forest.

FACILITIES

The Forest is responsible for construction, maintenance and administration of various facilities including roads, trails, and a variety of buildings or other structures.

There are 4,215 miles of Forest Service roads. Of this amount, 2,508 miles are classified as travelways. Travelways are unplanned, unconstructed and unmaintained two-track roads which exist as a result of prior off-road vehicle travel. Additional travelways are created each year as a result of public firewood gathering, hunting or other ORV activities.

Road construction has averaged 7.4 miles annually for the 11 years from 1970 through 1980. The average annual maintenance for the same period is 1,091 miles. From 1972 through 1982, an average of 5.5 miles of trail were constructed each year.

State Highway 44 between Placitas, New Mexico, and the Sandia Crest highway continues to be a transportation problem which effects other resources because of narrowness, lack of surfacing and drainage, and its location along Las Huertas Creek.

The 1975 Sandia Land Use Plan recommended the road be reconstructed and paved in place because: 1) weekend traffic results in congestion and hazardous driving conditions in summer; 2) storms cause periodic closure in winter; 3) maintenance is not cost effective and, therefore, is minimized causing excessive vehicle wear and tear; 4) water quality and fish habitat are reduced by sediment; and 5) riparian wildlife habitat and dispersed recreation opportunities are reduced by the volume of traffic and related noise.

Reconstruction in place, however, may destroy important wildlife and fisheries habitat and dispersed recreation opportunities, and may decrease public safety

because the narrow canyon may not be able to physically accommodate both a modern highway and a perennial stream. Rerouting or closing the road, however, could affect access to the dispersed and developed areas, the Sandia Mountain Wilderness, a potential ski area and private land. The effects would range from positive to negative, depending on the construction standards or the route chosen and the type of access permitted to these areas.

Because of these questions a decision has been made to study potential solutions through the environmental analysis process and recommend a preferred action before the revision of the Plan.

Many buildings and other structures have been constructed over the years to facilitate management and administration. Currently there are 10 fire lookouts, 22 storage buildings or shops, 19 family dwellings, 4 offices, 19 crew quarters, 13 miscellaneous buildings and 11 water/waste systems. There are four leased office buildings. Six dams are also maintained by the Forest or a special use permitted.

Future Trends

Current management direction does not permit adequate maintenance of roads and trails for the future.

In order to help meet the needs for access, the Forest in cooperation with local, state and county agencies will need to share the acquisition and granting of rights-of-way based upon negotiated jurisdictional status for roads on the system.

Current direction only provides for limited maintenance of Forest offices and other structures necessary to meet health and safety requirements. Portable or modular buildings will continue to be used.

Conclusion

As roads and trails continue to deteriorate with time, safety hazards and damage to other resources is expected to increase.

Many of the Forest Service buildings and other structures will need to be replaced within the next 20 years as it will no longer be cost effective to maintain them.

Expected Future Condition

The Plan will provide for construction or reconstruction of an average 60.6 miles annually of arterial, collector and local roads. This is a 39 percent increase over the current level of construction and reconstruction and responds to increased timber and other resource activities. Road maintenance will increase 26 percent over current, providing additional safety to road users. Approximately 1,790 miles of travelways will be closed by the end of Period 2. This action should reduce soil erosion, increase productivity of the land, and improve the quality of hunting opportunities. Local roads are designed for closure between the 20 year timber harvest entry periods. However, these roads will remain open for 1 to 2 years following harvest in order to permit firewood gathering.

Administrative facilities such as offices, houses, crew quarters and lookouts will receive funds for construction or reconstruction in the Plan. This amounts to $380,000 as compared to no funds at the current level.

Maintenance and rehabilitation funding for dams at Lake McClellan and Lake Marvin will be increased by 9 percent over the current level.

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